General Mills, Inc.
James Ford Bell Technical Center

9000 Plymouth Avenue North
Minneapolis, Minnesota 55427

WTT/45/93

October 14, 1993

Ms. Dagmar Romano
Minnesota Pollution Control Agency
Groundwater & Solid Waste Division
Site Response Section
520 Lafayette Road
St. Paul, MN 55155

SUBJECT: Response to September 1, 1993 meeting regarding East Hennepin Site

Dear Ms. Romano:

I am happy we had the opportunity to meet with you, Mr. Alcamo and Mr. Seaberg on September 1, 1993 regarding the site. I hope we did not overwhelm you with our numbers, but General Mills has a lot of interest in the site. I also want to reassure you that you will be notified in advance if General Mills will have any lawyers present at future meetings. I hope you will convey such information to others at MPCA and EPA as appropriate. I also hope you will reciprocate.

As a result of the meeting, I was left the responsibility to respond to you on four matters of interest to General Mills. I apologize for the delay in this response. I can only assure you the Murphy's Laws understate reality.

1. DELISTING THE SITE: Mr. Alcamo has responded regarding delisting. It appears that the site can not be delisted until the cleanup levels have been attained. I accept his judgment but want to reserve the opportunity to further discuss and better understand this matter.

   If we can not delist, then General Mills may wish to pursue changing the rating of the site. General Mills believes that the site is not a threat to public health or welfare. The Minnesota Department of Health and USPHS consider it a "limited public health concern." This is contrary to what our rating indicates. I want to discuss this further with you and Mr. Alcamo. There is no rush but keep this on the agenda.

2. REDUCE MONITORING AND REPORTING REQUIREMENTS: We stated at the meeting that monitoring and reporting requirements constitute the majority of General Mills cost pertaining to the site. Barr Engineering has proposed a 1994-1999 Operations and Monitoring Plan which is attached. We are interested in timely discussions on this proposal.

3. REDUCE OPERATING AND MAINTENANCE COST: General Mills plans to remove the packing material and fan from the stripper column. This change should reduce a growing annual cost component by about $10,000 annually. This change is planned for mid-November. We believe this change is allowed in the consent order as discussed below. If you have any comments or questions regarding this change, please call me.

   Well #110 does not need treatment because its TCE concentration is under 500 ug/l (Exhibit A, Section 1.3.3 of the Response Order by Consent). The only influent concentrations measured are the flow weighted composite of wells #108, 109 & 110. It has been below this level since 1988 except for one anomaly in April, 1991 when there was a major motor control failure on well #110.

Other influents do not need treatment if their TCE concentration is under 270 ug/l. I conclude that we are allowed to discharge the composite water flow directly to the storm sewer if the flow weighted average TCE concentration is under 308 ug/l.

The current influent to the stripper column has a flow weighted average TCE concentration of less than 150 ug/l (Magnolia and glacial drift). This number is considerably below either of the treatment threshold discussed above.

Removal of the packing and fan does not eliminate treatment and is not an irreversible process. Glacial drift wells will have some treatment as the water falls from the existing spray heads and will continue to have some passive treatment in the sewer. If you wish, we will be happy to provide a measurement of the resulting efficiently of the spray heads.

4. We want to explore how to improve the consistency of MPCA actions. Each new Project Leader and hydrogeologist has an interest in studying issues that have been studied to the satisfaction of previous Project Leaders and hydrogeologists.

I look forward to hearing your comments and working together on these matters.

Sincerely,

William Taylor

CC:

Dick Hagen	MGO 1E
Gary Olmstead	MGO 4S
Bill Crutcher	MGO 4SE
Larry Sawyer	MGO 4NE
Peter Sabee	Barr Engineering
Tom Alcamo	US EPA

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EAST HENNEPIN AVENUE SITE
PROPOSED 1994 -1999 OPERATIONS AND MONITORING PLAN

The following monitoring plan is recommended for the period January 1, 1994 to December 31, 1999. The proposed plan is consistent with the terms of the Consent Order, and is suitable for a site with a status characterized as long term operation and monitoring.

Intensive monitoring of the East Hennepin Avenue site has occurred since February 1984. The results from this monitoring have defined the limits of groundwater contamination; have documented the effectiveness of the site groundwater pump-out systems; and have documented that site conditions in all affected aquifers have been stable since 1987.

The Consent Order specifies that the purpose of the groundwater monitoring program is to: monitor the effectiveness of the groundwater pump-out systems; define changes in the distribution of volatile hydrocarbon concentrations; and determine when operation of the system can be shut down.

The effectiveness of groundwater pump-out systems has been determined through aquifer pumping tests and groundwater modeling. The operational history (pumping rates and total gallons pumped) has been monitored since 1985. This time period includes both record wet and record dry years.

General Mills, Inc. proposes to monitor the continued effectiveness of the pump-out systems through water quality monitoring and through operational monitoring. Water quality monitoring will involve the annual collection of groundwater samples from down gradient glacial drift Wells V and W. The samples will be analyzed on alternating years for trichloroethylene and List 2 volatile organic compounds (Table 1).

Operational monitoring will involve the comparison of monthly mean pumping rates with historical pumping rates. If pumping rates fall below an action level (Table 2), an assessment of the operational status of the well will be conducted and necessary repairs will be made.

Platteville Formation pump-out system operational monitoring will also include an annual 24-hour recovery test. This test will be conducted to determine if Magnolia member pump-out Wells MG-1 and MG-2 are maintaining an adequate capture zone in the Platteville Formation. The recovery test will involve the measurement of water levels in Wells RR, SS, VV, OO, TT, and WW. Water levels will be measured prior to, and 24-hours after an annual shutdown of pump-out Wells MG-1 and MG-2. The data will be evaluated to determine if the Magnolia wells continue to generate similar drawdown as was observed during the 1992 pumping test.

The results of long term groundwater quality monitoring at the site indicate that site groundwater contaminant concentrations are fluctuating (since 1987) within a range of historical concentrations. Trends indicating a gradual improvement or degradation of water quality have not been observed. Future

change is not anticipated because the groundwater pump-out systems are effectively containing groundwater affected by the East Hennepin Avenue site.

As indicated previously glacial drift wells V and W will be monitored on an annual basis for trichloroethylene (even numbered years) and List 2 volatile organic compounds (odd numbered years). Continued monitoring of Platteville Formation Wells 9, 10, 13, SS and TT is also proposed. Monitoring will consist of the annual collection of groundwater samples for the analysis of trichloroethylene (even numbered years) and List 2 volatile organic compounds (odd numbered years).

Monitoring of all glacial drift monitoring wells located within the capture zone of the glacial drift pump-out systems (Wells 1, B, 3, Q, R, S, T, U and X), and monitoring of Platteville Formation monitoring Wells 8, 11, 12, BB, RR, WW, VV, OO, QQ and ZZ (located within the Platteville Formation pump-out system capture zone) will be discontinued. The purpose of monitoring groundwater quality within the capture zone of the pump-out systems is to determine if the concentration of trichloroethylene has fallen below the Consent Order specified standard of 270 ug/L (glacial drift monitoring wells) or 27 ug/L (Platteville Formation monitoring wells). The concentration of trichloroethylene, however, has stabilized above this standard at many of these locations, and as a result, continued monitoring is unnecessary.

Monitoring of the St. Peter monitoring wells and the Henkel well will also be discontinued. The collection of additional data will not provide a better understanding of the water quality in these aquifers. Nine years of monitoring has adequately characterized water quality at these monitoring points and has demonstrated that the quality of groundwater is not changing.

NPDES monitoring will continue as specified in the permits. NPDES monitoring currently involves the collection of effluent water quality samples from each pump-out system and the stripper tower. In addition to trichloroethylene and List 2 volatile organic compounds, priority pollutant volatile organic compounds and flow rate measurements are required on a routine basis.

Quarterly letter reports describing the results of operations, monitoring and maintenance will be prepared and submitted to the Minnesota Pollution Control Agency. The reports will contain tables summarizing operational and monitoring data. Laboratory data reports will be attached to the report. Any data which indicates a long term change in the operational status or effectiveness of the pump-out systems will be discussed in detail. A description of any action taken in response to this information will also be documented.

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TABLE 1
LIST 2 VOLATILE ORGANIC COMPOUNDS

1,1-Dichloroethane
1,2-Dichloroethane
1,2-Dichloroethylene, cis
1,2-Dichloroethylene, trans
1,1,2,2-Tetrachloroethane
Tetrachloroethylene
1,1,1-Trichloroethane
Trichloethylene
Benzene
Toluene
Xylenes

TABLE 2
PUMP-OUT SYSTEM OPERATION GUIDELINES
PUMPING RATES

PUMP-OUT WELL IDENTIFICATION	TARGET PUMPING RATE (AVERAGE MONTHLY GPM)	ACTION LEVEL (AVERAGE MONTHLY GPM)
WELL 109	30	20
WELL 110	50	40
WELL 111	90	80
WELL 112	100	80
WELL 113	90	80
WELL MG-1	100	80
WELL MG-2	100	80

If action levels are not met, an assessment of the operational status of the pump-out well will be undertaken and any necessary repairs will be made.